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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/663,355	09/15/2000	David D. Huo	2925-455P	1841
30594	7590	12/16/2003	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195			NG, CHRISTINE Y	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 12/16/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/663,355

Applicant(s)

HUO, DAVID D.

Examiner

Christine Ng

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 15 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-9, 11-14 and 16-19 is/are rejected.
- 7) ☒ Claim(s) 5, 10 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 September 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2, 4 & 6.

- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-4, 9 and 11-14 are rejected under 35 U.S.C. 102(a) as being unpatentable over U.S. Patent No. 5,974,315 to Hudson.

Referring to claims 1 and 11, Hudson discloses in Figures 5a-5c a communication method and means for transmitting a first type of information (H, S, S-BCCH and S-AGCH) on a first frequency carrier in accordance with a first multiframe type (102 frames), said first multiframe type having x (102) frames, x (102) being an integer. In time slot TN₀, H-burst (H) information is carried in frames 0, 22, 61, and 81; S-burst (S) information is carried in frame 1; broadcast control channel (S-BCCH) information is carried in frames 2-5; and access grant channel (S-AGCH) information is carried in frames 6-101. Refer to Column 18, lines 7-12 and lines 25-43. The communication method and means also includes transmitting a second type of information (S-HPACH) on the first frequency carrier in accordance with a second multiframe type (99 frames), said second multiframe type having y (99) frames, wherein y (99) is an integer that is different than x (102). High power alerting channel (S-HPACH) information is carried in frames 2-100 of time slot TN₄. Refer to Column 18, lines 21-25 and lines 60-64. Furthermore, Figures 5a-5c "illustrate the time assignment

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of the various forward control signals generated by the NCC 18 of Figure 4 for one forward control carrier" (Column 16, lines 65-67), which is divided into 8 time slots labeled TN_0 to TN_7. Refer to Column 11, lines 43-53.

Referring to claims 2 and 12, Hudson discloses in Figures 5a-5c that the first type of information includes broadcast control information. The first type of information includes broadcast control channel (S-BCCH) information, which is transmitted in frames 2-5 of time slot TN_0. Refer to Column 18, lines 7-12.

Referring to claims 3 and 13, Hudson discloses in Figures 5a-5c that the first type of information includes common control information. The first type of information includes common control information (access grant channel (S-AGCH) information), which is transmitted in frames 6-101 of time slot TN-0. Refer to Column 18, lines 25-43. S-AGCH is a common control channel that transmits "information relating to the granting of access to one user terminal; the granting of access requires assigning of a traffic carrier frequency, and of identifying the particular TDMA slot set of that carrier which is to be used" (Column 18, lines 26-30). Refer to Column 28, lines 1-4.

Referring to claims 4 and 14, Hudson disclose in Figures 5a-5c that the first type of information includes broadcast control information and the second type of information includes common control information. The first type of information includes broadcast control channel (S-BCCH) information, which is transmitted in frames 2-5 of time slot TN_0. Refer to Column 18, lines 7-12. The second type of information includes common control information (high power alerting channel (S-HPACH) information), which is carried in frames 2-100 of time slot TN_4. Refer to Column 18, lines 21-25 and

lines 60-64. S-HPACH is a common control channel "for alerting users terminals of incoming calls" (Column 18, lines 24-25). Refer to Column 28, lines 1-4.

Referring to claim 9, Hudson discloses in Figures 1 and 5a-5c that a base station (Network Control Center; Figure 1, Element 18) of a wireless network performs the step of transmitting a first type of information (H, S, S-BCCH and S-AGCH) and the step of transmitting a second type of information (S-HPACH). Figures 5a-5c "illustrate the time assignment of the various forward control signals generated by the NCC 18 of Figure 4 for one forward control carrier" (Column 16, lines 65-67) to transmit H, S, S-BCCH, S-AGCH and S-HPACH signals. Refer to Column 9, lines 11-17 and lines 37-54.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,974,315 to Hudson in view of U.S. Patent No. 5,933,418 to Massingill et al. Hudson does not disclose that the first multiframe type has 51 frames. Massingill et al disclose in Figure 3 that in GSM systems, frequency correction bursts (F), synchronization bursts (S), broadcast control channel (BCCH) and common control channels (CCCH) are carried in timeslots of a 51 multiframe structure. Bursts F aid the mobile terminal in locating the control carrier; bursts S contains information on the timing structure of the cell; BCCH contains information about the cell; and CCCH carries

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messages targeted to specific mobile terminals. Refer to Column 1, line 57 to Column 2, line 42. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the first multiframe type has 51 frames; the motivation being that in GSM systems, important cell-specific information and mobile-targeted information, including F, S, BCCH and CCCH information, are carried in a 51 multiframe.

5. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,974,315 to Hudson in view of U.S. Patent No. 6,438,115 to Mazur et al. Hudson does not disclose that the first multiframe type has 52 frames. Mazur et al teach that a 52 multiframe is used in GPRS systems, which forms "the basis of how many physical channels should be allocated for different logical channels, e.g. Packet Data Traffic Channels, Packet Broadcast Channels, Packet Paging Channels and Packet Access Grant Channels" (Column 5, lines 13-18). The GPRS 52 multiframe is further divided into 12 blocks with 4 TDMA frames for the logical channels, 2 idle TDMA frames and 2 frames of Packet Timing Advance Control Channel Signaling. Refer to Column 5, lines 1-29. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the first multiframe type has 52 frames; the motivation being that in GPRS systems, important broadcast and common control channels are carried in a 52 multiframe.

6. Claims 8 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,974,315 to Hudson in view of U.S. Patent No. 5,933,418 to Massingill et al, and in further view of U.S. Patent No. 6,438,115 to Mazur et al. Hudson discloses

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that the first type of information includes broadcast control information and the second type of information includes common control information. Refer to the rejection of claims 4 and 14. However, Hudson and Massingill et al do not disclose that the second multiframe type has 52 frames. Mazur et al teach that a 52 multiframe is used in GPRS systems, which forms "the basis of how many physical channels should be allocated for different logical channels, e.g. Packet Data Traffic Channels, Packet Broadcast Channels, Packet Paging Channels and Packet Access Grant Channels" (Column 5, lines 13-18). The GPRS 52 multiframe is further divided into 12 blocks with 4 TDMA frames for the logical channels, 2 idle TDMA frames and 2 frames of Packet Timing Advance Control Channel Signaling. Refer to Column 5, lines 1-29. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the first multiframe type has 52 frames; the motivation being that in GPRS systems, important broadcast and common control channels are carried in a 52 multiframe.

7. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,974,315 to Hudson in view of U.S. Patent No. 5,933,418 to Massingill et al. Hudson discloses in Figures 4 and 5a-5c that a base station (Network Control Center; Figure 4, Element 18) of a wireless network comprises components (Figure 4; Elements 420, 425a-425n, 426a-426, 428 and 430) to transmit forward control signals. Refer to Column 16, lines 18-42. Figures 5a-5c "illustrate the time assignment of the various forward control signals generated by the NCC 18 of Figure 4" (Column 16, lines 65-67) to transmit forward control signals including a first type of information (H, S, S-BCCH, S-

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AGCH) in TN_0 and a second type of information (S-HPACH) in TN_4. Refer to Column 9, lines 11-17 and lines 37-54.

Allowable Subject Matter

8. Claims 5, 10 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (703) 305-8395. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nguyen Chau can be reached on (703) 308-5340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-8395.

C. Ng *cu*
December 11, 2003

Chau T. Nguyen
CHAU NGUYEN
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